

In the Claims

Applicants present replacement claims below indicating the changes with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

1. (Currently Amended) An article comprising:
an electrical crossbar array comprising at least two crossed ~~wires~~ conductors, at least one of which is a nanoscopic wire constructed and arranged to be movable from a first position to a second position.
2. (Canceled)
3. (Currently Amended) An article as in claim 1, wherein the at least two ~~wires~~ conductors are in electrical contact with each other.
4. (Canceled)
5. (Currently Amended) An article as in claim 1, wherein the at least two ~~wires~~ conductors are not in contact with each other.
6. (Canceled)
7. (Currently Amended) An article as in claim 1, wherein the at least two ~~wires~~ conductors comprise a first wire disposed adjacent a second wire at a junction.
8. (Currently Amended) An article as in claim 7, wherein ~~the a~~ a first wire conductor of the at least two crossed conductors is positioned on a substrate.
9. (Currently Amended) An article as in claim 8, wherein the first ~~wire~~ conductor is positioned intermediate the substrate and ~~the a~~ a second wire conductor of the at least two crossed conductors.

10. (Currently Amended) An article as in claim 9, wherein the second ~~wire~~ conductor is supported above the first ~~wire~~ conductor, relative to the substrate.
- 11-12. (Canceled)
13. (Currently Amended) An article as in claim 7, wherein the second ~~wire~~ conductor has sufficient stiffness to remain free of contact with the first ~~wire~~ conductor.
14. (Currently Amended) An article as in claim 13, wherein the second ~~wire~~ conductor has a sufficient Young's modulus, such that the second ~~wire~~ conductor is capable of deformable van der Waals contact with the first wire at the junction, upon exposure to a stimulus.
15. (Canceled)
16. (Currently Amended) An article as in claim 1, wherein the crossbar array comprises a first set and second set of at least two parallel ~~wires~~ conductors.
17. (Currently Amended) An article as in claim 16, wherein the first set of parallel ~~wires~~ conductors is perpendicular to the second set of parallel ~~wires~~ conductors.
18. (Currently Amended) An article as in claim 16, wherein the second set of ~~wires~~ conductors is disposed adjacent the first set of ~~wires~~ conductors at a plurality of junctions.
19. (Canceled)
20. (Currently Amended) An article as in claim 1, further comprising a contact electrode in electrical contact with at least one of the ~~wires~~ conductors.

21. (Currently Amended) An article as in claim 20, wherein the at least one ~~wire~~ conductor is attached to the contact electrode.
22. (Currently Amended) An article as in claim 20, wherein the at least one ~~wire~~ conductor is covalently attached to the contact electrode.
23. (Currently Amended) An article as in claim 1, wherein each of the at least two ~~wires~~ conductors is in electrical contact with a different contact electrode.
- 24-55. (Canceled)
56. (Currently Amended) An article comprising:

An electrical crossbar array comprising at least two crossed ~~wires~~ conductors defining a memory element able to be switched between at least two readable states, at least one of the ~~wires~~ conductors being constructed and arranged to be movable from a first position to a second position, the article free of means addressing the memory element to effect switching of the memory element between the at least two states, wherein at least one of the conductors is produced by a process comprising forming the conductor, and transporting the conductor onto a surface.
57. (Currently Amended) An article comprising:

An electrical crossbar array comprising at least two crossed ~~wires~~ conductors defining a memory element able to be switched between at least two readable states, at least one of the ~~wires~~ conductors being constructed and arranged to be movable from a first position to a second position, the article free of auxiliary circuitry defining the memory element, wherein at least one of the conductors is produced by a process comprising forming the conductor, and transporting the conductor onto a surface.
58. (Currently Amended) An article as in claim 57, wherein the memory element comprises

a junction of the two crossed ~~wires~~ conductors.

59. (Original) An article as in claim 57, wherein the auxiliary circuitry includes transistors and capacitors.

60-89. (Canceled)

90. (Currently Amended) An article comprising:

an electrical crossbar array comprising at least two crossed nanoscopic ~~wires~~ conductors defining a memory element capable of being switched reversibly between at least two readable states, at least one of the ~~wires~~ conductors being constructed and arranged to be movable from a first position to a second position.

91. (Currently Amended) An article as in claim 90, wherein the step of switching comprises biasing the at least two nanoscopic ~~wires~~ conductors.

92. (Previously presented) An article as in claim 90, wherein information stored in the memory element is volatile.

93. (Previously presented) An article as in claim 90, wherein information stored in the memory element is non-volatile.

94. (Currently Amended) An article as in claim 90, wherein one readable state comprises the two ~~wires~~ conductors in van der Waals contact.

95. (Currently Amended) An article as in claim 90, wherein the two ~~wires~~ conductors have sufficient van der Waals adhesion to maintain contact.

96. (Currently Amended) An article comprising:

an electrical crossbar array comprising at least two crossed nanoscopic ~~wires~~

conductors defining a memory element capable of being switched irreversibly between at least two readable states, at least one of the ~~wires~~ conductors being constructed and arranged to be movable from a first position to a second position.

97. (Currently Amended) An article as in claim 96, wherein the step of switching comprises biasing the at least two nanoscopic ~~wires~~ conductors.
98. (Currently Amended) An article comprising:
an electrical crossbar array comprising at least two crossed ~~wires~~ conductors defining a memory element diode, at least one of the ~~wires~~ conductors being constructed and arranged to be movable from a first position to a second position, the article being free of auxiliary circuitry defining the memory element diode.
99. (Currently Amended) An article as in claim 98, wherein the two crossed ~~wires~~ conductors comprise a ~~first-wire~~ nanotube disposed adjacent a second wire at a junction.
100. (Currently Amended) An article as in claim 99, wherein the ~~first-wire~~ nanotube is a semiconductor.
101. (Previously presented) An article as in claim 100, wherein the second wire is a metallic conductor.
102. (Previously presented) An article as in claim 100, wherein the second wire is a semiconductor.
103. (Previously presented) An article as in claim 100, wherein the second wire is a semiconducting nanotube.
104. (Previously presented) An article as in claim 103, wherein the second wire is a metallic nanotube.

105-106. (Canceled)

107. (Currently Amended) An article as in claim ~~106~~ 1, wherein the nanotube is single-walled.

108. (Previously presented) An article as in claim 107, wherein the nanotube is a single-walled carbon nanotube.

109. (Previously presented) An article as in claim 107, wherein the nanotube is a multiwall carbon nanotube.

110. (Currently Amended) An article as in claim ~~106~~ 1, wherein the nanotube is a semiconducting nanotube.

111. (Currently Amended) An article as in claim ~~106~~ 1, wherein the nanotube is a metallic nanotube.

112. (Currently Amended) An article as in claim ~~106~~ 1, wherein the nanoscopic wire comprises a nanotube rope.

113. (Canceled)

114. (New) The article of claim 1, wherein at least one of the conductors is produced by a process comprising forming the conductor, and transporting the conductor onto a surface.

115. (New) The article of claim 90, wherein at least one of the conductors is produced by a process comprising forming the conductor, and transporting the conductor onto a surface.

116. (New) The article of claim 96, wherein at least one of the conductors is produced by a process comprising forming the conductor, and transporting the conductor onto a surface.
117. (New) The article of claim 98, wherein at least one of the conductors is produced by a process comprising forming the conductor, and transporting the conductor onto a surface.